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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,516	09/26/2003	Teruo Katoh	2003-1378A	6484
513	7590	09/30/2004	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			NGUYEN, LINH M	
2033 K STREET N. W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20006-1021			2816	

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,516

Applicant(s)

KATOH ET AL.

Examiner

Linh M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003 and 29 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/29/03.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 09/17/04.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-5 are currently presented in the instant application according to the Applicants' filing on 09/26/2003. The examiner contacted the Applicants' representative, Nils Pedersen, to purposefully resolve the listed below objections in order to place the application in condition for allowance but was advised to send out an office action instead.

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

It is suggested that the title should be changed to be more descriptive according to the disclosed invention as follows:

“ A phase locked loop circuit with an unlock detection circuit and a switch”.

Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recited feature “a switch unit for shutting up the output signal of the loop filter based on the unlock detecting signal” in claims 1, 2 and 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Appropriate correction is required.

Claim Objections

4. Claims 1-5 are objected to because of the following informalities:

Claim 1, line 8, (in front of output), change “the” to --an--;

line 15, (in front of output), change “the” to --an--;

Line 20, replace “outputting” with “detecting”;

Delete “the” (at end of line).

Claim 2, line 7, delete “input”;

line 11, (in front of output), change “the” to --an--;

line 20, (in front of output), change “the” to --an--.

Claim 3, line 7, delete “input”;

line 25, (starting with a positive integer), change “the” (first occurrence) to

--an--.

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Claim 4 and claim 5 are also objected because of their dependency on claim 1 and claim 2, respectively.

Appropriate correction is required.

Allowable Subject Matter

5. Claims 1-5 would be allowed if corrected to overcome the objections set forth in this office action.

Reasons for Allowance

6. The following is an examiner's statement of reasons for allowance:

The closest prior art fails to disclose or fairly suggest a phase locked loop including an unlock detecting circuit for detecting unlocking of a phase lock based on an index signal and a reference signal or based on an output signal of a phase comparator and for outputting an unlock detecting signal; and a switch unit for shutting up an output signal of a loop filter based on the unlock detecting signal and inputting a predetermined signal to a controlled oscillator, in combination with the remaining claimed limitations, as called for in claims 1, 2 and 3.

Citation of Relevant Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Martin et al. (U.S. Patent No. 5,686,864) discloses a method and an apparatus for controlling a voltage controlled oscillation tuning range in a frequency synthesizer having a lock detect circuit and a phase comparator.

Prior art Sanders et al. (U.S. Patent No. 4,105,975) discloses an offset correction circuit for phase detectors.

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Inquiry

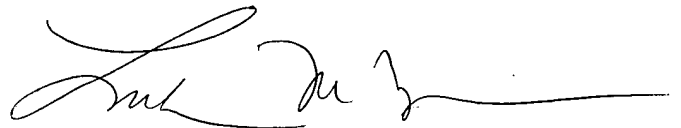
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh M. Nguyen whose telephone number is (571) 272-1749. The examiner can normally be reached on Alternate Fri, Monday - Thursday from 7:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMN

**LINH MY NGUYEN
PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'Linh My Nguyen', with a long horizontal flourish extending to the right.